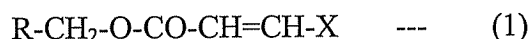


IN THE CLAIMS

1. (Currently Amended) An acryl-modified polyester resin composition for coating a pre-coated metal steel sheet, comprising:

an acryl-modified polyester resin produced by a polymerization of a polyester resin intermediate of formula (1) and an acryl monomer:



wherein R represents a polyester polymer residue, and X represents a methyl or carboxylic group, and wherein the polyester resin intermediate has a hydroxyl value of about 1 to 20 mgKOH/g and an acid value of ~~[[10]]~~ 15 to 30 mgKOH/g; and

a solvent comprising cyclohexanone, isophorone, or a combination thereof,

wherein the acryl-modified polyester resin composition has a Gardner bubble viscosity of X to Z3 and a paint film comprising the acryl-modified polyester resin composition has a pencil hardness of H or harder according to NCCA-II-12.

2. (Previously Presented) The composition of claim 1, wherein the polyester resin intermediate has an average molecular weight of about 1500 to 15000.

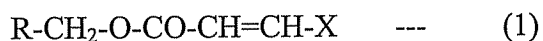
3. (Previously Presented) The composition of claim 1, wherein the acryl monomer is at least one selected from the group consisting of acrylonitrile, acrylimide, diacetone acrylimide, methylacrylate, butylmethacrylate, laurylmethacrylate, acrylic acid, methylmethacrylate, ethylacrylate, butylacrylate, ethylmethacrylate, glycidyl methacrylate, 2-hydroxyethylmethacrylate, 2-hydroxyethylacrylate and hydroxypropylacrylate.

4. (Original) The composition of claim 1, wherein the acryl monomer undergoes a radical reaction at a temperature of about 80 to 140°C.

5. (Currently Amended) A method of preparing an acryl-modified polyester resin composition for coating a pre-coated metal steel sheet, comprising:

i) condensing a polyhydric alcohol and a polybasic acid in a solvent to give a polyester resin;

ii) polymerizing the polyester resin and an unsaturated polybasic acid to give a polyester resin intermediate of formula (1) having a carbon-carbon double bond at one end,



wherein R represents a polyester polymer residue, and X represents a methyl or carboxylic group; and

iii) polymerizing the polyester resin intermediate and an acryl monomer in the presence of a solvent comprising cyclohexanone, isophorone, or a combination thereof to give the acryl-modified polyester resin composition, wherein the polyester resin intermediate has a hydroxyl value of about 1 to 20 mgKOH/g and an acid value of ~~[[10]]~~ 15 to 30 mgKOH/g, and wherein the acryl-modified polyester resin composition has a Gardener bubble viscosity of X to Z3 and a paint film comprising the acryl-modified polyester resin composition has a pencil hardness of H or harder according to NCCA-II-12.

6. (Previously presented) The method of claim 5, wherein the polyester resin intermediate has a average molecular weight of about 1500 to 15000, and wherein a content of the polyester resin intermediate is about 30 to 80% by weight based on a total weight of a resultant of step ii).

7. (Original) The method of claim 5, wherein the polyester resin intermediate and the acryl monomer are polymerized by adding the acryl monomer together with an initiator at least one selected from the group consisting of isobutyl peroxide, tertbutylperoxyneodecanoate, octanonyl peroxide, benzoyl peroxide, acetyl peroxide, ditert-butyl peroxide, azoisobutyronitrile and tert-butylperoxylaurate.

8. (Original) The method of claim 5, wherein the polyester resin intermediate and the acryl monomer are polymerized by copolymerizing about 100 parts by weight of the polyester resin intermediate and about 5 to 100 parts by weight of the acryl monomer.

9. (Previously Presented) The method of claim 5, wherein the polyhydric alcohol is at least one selected from the group consisting of ethylene glycol, propylene glycol, 1,4-butylene glycol, 1,5-pentanediol, 1,6-hexanediol, neopentyl glycol, methyl propanediol, cyclohexane dimethanol and trimethylpentanediol,

wherein the polybasic acid is at least one selected from the group consisting of phthalic anhydrides, tetrahydrophthalic anhydrides, hexahydrophthalic anhydrides, isophthalic acid, terephthalic acid, adipic acid, azelaic acid, sebacic acid and cyclohexanediacid, and

wherein the unsaturated polybasic acid alcohol is at least one selected from the group consisting of maleic acid, maleic anhydrides, fumaric acid, itaconic acid and itaconic anhydrides.

10. (Previously Presented) The composition of claim 1, wherein the acryl-modified polyester resin composition is produced by a polymerization of the polyester resin intermediate, the acryl monomer and styrene.

11. (Canceled).

12. (Canceled).